

In the Claims

1. (Currently Amended) An isolated and purified protein comprising a mammalian K^+ channel with two pore domains, wherein said channel produces currents whose current-voltage relationship is weakly inwardly rectifying in high symmetrical K^+ conditions, and wherein said channel comprises the amino acid sequence of SEQ ID NO: 2.
2. (Original) The protein of claim 1, wherein said channel is a human K^+ channel.
3. (Currently Amended) The protein of claim 1, ~~having a sequence of amino acids as set forth in~~ consisting essentially of the amino acid sequence of SEQ ID No. 2. NO: 2.
4. - 26. (Cancelled)
- 4 ~~27~~. (Currently Amended) The mammalian K^+ channel of claim 1, wherein said high symmetrical K^+ conditions is a K^+ -rich external medium of ~~around~~ about 150mM.